



What Makes Washday Less Blue? Gender, Nation, and Technology Choice in Postwar Canada

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What Makes Washday Less Blue? *Gender, Nation, and Technology Choice* *in Postwar Canada*

J O Y P A R R

The way Canadian women did their wash confounded the appliance managers of American branch plants in the late 1950s. In 1959 wringer washers—a technology little altered in twenty years, and by contemporary engineering standards a technology entirely superseded—outsold automatics three to one in Canada. This was exactly the reverse of the pattern in the United States, where automatics that year accounted for 75 percent of sales.¹ “Theoretically there is no market for ordinary washing machines as everyone should be buying the automatic type,” a senior official at Canadian General Electric asserted counterfactually. He added in a bemused attempt at explanation, “I suppose, however, that the big market for ordinary washing machines lies in less developed countries.” E. P. Zimmerman, who ran the appliance division at Canadian Westinghouse, yearly through the 1950s forecast a breakthrough for automatic machines in Canada, as did his counterparts at Kelvinator and Frigidaire, and yearly found that sales of wringer machines remained strong. “This is strange,” he affirmed (implicitly rejecting the underdeveloped countries explanation), “because usually Canada is much closer to U.S. trends than this.”²

Readers familiar with the literature on domestic technology might

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¹Canadian Westinghouse Hamilton, Employment Forecast Interview Report (EFIR) May 5, 1959, RG 20 767, National Archives of Canada (NAC); “Thor Gathers Speed after US Agreement,” *Marketing*, April 24, 1959, 8. *Marketing* was the Canadian equivalent of *Printer’s Ink*.

²Canadian General Electric, October 7, 1958, EFIR December 6, 1962, RG 20 765 23-100-C27, NAC; Zimmerman’s comments are in Canadian Westinghouse, EFIR May 6, 1959, RG 20 767, NAC; for Kelvinator see RG 20 773 NAC.

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share this puzzlement, because the fine work published in the early 1980s by Strasser and Cowan on the United States case has served as the template for understanding household technology in the North Atlantic world. United States production of automatics surpassed wringers definitively in 1951. Although Strasser and Cowan are attentive to distinctions between the priorities of makers and users, in the case of washing machine technology they report not conflict but a quick convergence of interest.³ They find that automatics were accepted into American households as soon as they were made available by U.S. manufacturers.⁴

Cowan's justly famous parable about how the refrigerator got its hum, which has the giant electrical apparatus and automobile manufacturers successfully championing the condensor cooling technology over which they commanded proprietary rights, only makes the prolonged failure of automatic washers in the Canadian market seem more inexplicable.⁵ For it was these same American makers, and for the same reasons, who intended to have Canadian women of the 1950s do their washing in automatic machines. In fact, it was not until 1966, fifteen years later than in the United States, that Canadian automatic sales passed those of wringer washers.⁶

A European observer might not be so befuddled by the Canadian pattern. In the early 1950s when automatics were coming to dominate the U.S. market, fewer than one in five British households owned any washing machine. Still, in 1969 only 5 percent owned automatics. Most domestic laundry was done either in a copper boiler, a variation on the wringer washer which heated the water and used the boiling action rather than a central agitator to circulate the clothes, or in the modern technology of choice, a twin-tub which

³Judy Wajcman suggests in her study of refrigerators, however, that Cowan reduced housewives to the role of consumers, responsive only to price, and told the story as a rivalry between manufacturing interests in which user preferences did not figure. Judy Wajcman, *Feminism Confronts Technology* (University Park, Pa., 1991), p. 102. It is worth considering whether the precedence of price over use values in consumer decision-making may have been more marked in the United States than in other North Atlantic economies in the 1950s.

⁴Susan Strasser, *Never Done: A History of American Housework* (New York, 1982), pp. 267–68; Ruth Schwartz Cowan, *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave* (New York, 1983), p. 94.

⁵Cowan, pp. 128–43.

⁶*Home Goods Retailing (HGR)*, January 23, 1967: 1, 7, 23. *Home Goods Retailing* addressed in Canada roughly the same market as *Electrical Merchandising* in the United States. Domestic Appliances—Canadian Manufacturing + Imports—Exports for 1965 and 1966, RG 20 1755 8001-404/34 NAC.

housed the washtub and spin dryer side by side in a single casing. Both of these technologies were rare in either Canada or the United States. Even in 1981, there were automatics in only 40 percent of British homes.⁷

Considering the British case, Christine Zmroczek in 1992 observed, "If we want to understand women's experiences of technology, it is important to look closely enough to uncover the differences from country to country and culture to culture, even within Western capitalism." For the interwar period in France Robert Frost draws similar conclusions, pointing out how ill-fitted were American-modeled domestic appliances for French domestic settings. Manufacturers in search of international mass markets have sought to erase differences. Yet recent cross-cultural studies of household technology clearly show that differences have persisted between men and women, and between makers and users. These distinctions mark cultural differences which *frame* as surely as they are framed by historical differences between national economies.⁸

Household technology is centrally different from industrial technology. An industrialist commissions a machine from a producer goods manufacturer, as he might commission a suit from a custom tailor. The machine and the suit, having been made to the user's specifications, upon delivery, are promptly put to use. In household technology, this smooth transition cannot be assumed.⁹ Makers, as Mme Renee Vautelet, a past president of the Canadian Association of Consumers, noted in 1958, tended to think of consumers as "the buying side" of themselves.¹⁰ In certain conjunctures, the cultural similarities between domestic machine makers and domestic machine users may transcend those differences made by the market economy and gender. Machines offered for sale then may be accepted unproblematically by women seeking tools for their house-

⁷T. A. B. Corley, *Domestic Electrical Appliances* (London, 1966), pp. 131–36; Penny Sparke, *Electrical Appliances* (London, 1987), chap. 7; the best British article on women and laundry technology is Christine Zmroczek, "Dirty Linen: Women, Class and Washing Machines, 1920s–1960s," *Women's Studies International Forum* 15 (1992): 173–85. The statistics used in this paragraph are drawn from Zmroczek, pp. 180, 182, tables 1 and 2.

⁸Zmroczek, p. 182; Robert Frost, "Machine Liberation: Inventing Housewives and Home Appliances in Interwar France," *French Historical Studies* 18 (1993): 128; Cynthia Cockburn and Ruza Furst Dilic, eds., introduction to *Bringing Technology Home: Gender and Technology in a Changing Europe* (Buckingham, 1994), p. 17.

⁹There is a fine discussion of this issue in Wajcman (n. 3 above), chap. 4.

¹⁰"Are We 'Selling' the Company to the Consumer?" *Industrial Canada*, July 1958, p. 140.

hold work. In the United States, for automatic washers, this appears to have been the case, at least for middle-class urban women.¹¹ But generally the culture of makers and the culture of users are very different. Machinery which is not made to the specifications of the users, as household technology almost always has not been, often does not satisfy.¹² Here gender, but also class and national differences are at play. Of laundry technology in particular, the Croatian journalist Slavenka Drakulic recalls, "it was only when I first washed my clothes in the States, in 1983, in an American washing machine, that I became aware how differences in tradition influence both the industry and my own attitude towards doing laundry." American machines did not heat the water to 95°C and ran for only a third as long. Though the grandmother who had taught her the secrets of washing "had already passed away," Drakulic writes that "I just could not help remembering her, because, strangely enough, I felt as if my clothes were not properly washed at all."¹³

Understanding what constitutes a proper job is integral to understanding what is acceptable as a proper machine. For many technologies this premise is axiomatic to the design process. For household technologies, particularly domestic technologies used primarily by women, it is not. To understand why women have refused apparently excellent new machines, we need to pay attention to users and include "an examination of the *details* of women's lives" as part of the history of technological change.¹⁴ To understand the effects of machines which were put to use, we need to consider how "the form of the household, and the sexual division of labour within it" might actively have shaped domestic technology.¹⁵ A discussion of household technological choice must reckon not only how women's technological preferences as users differed from men's technological preferences as makers and sellers, how engineering and commercial priorities came to prevail, but the possibility that *men, as makers and sellers, did not always get their way*. Here I try to set such a broad context

¹¹Peter J. McClure and John K. Ryans, Jr., "Differences Between Retailers' and Consumers' Perceptions," *Journal of Marketing Research*, February 1968: 35–40; the discussion of retailers' understandings of consumer valuation of automatic washers is on pp. 36–37.

¹²For example, see the discussion of product engineering in a 1980 Spanish washing machine firm, M. Carme Alemany Gomez, "Bodies, Machines and Male Power," in Cockburn and Dilic, pp. 132–33.

¹³Slavenka Drakulic, *How We Survived Communism and Even Laughed* (New York, 1993), p. 53. The whole chapter, "On Doing Laundry," pp. 43–54 is compelling reading for those interested in these questions.

¹⁴Zmroczek (n. 7 above), p. 183.

¹⁵Wajcman (n. 3 above), p. 102.

for technological choice, considering how traits of the Canadian political economy and of makers and marketers worked with and against the internal politics of households and perceptions of well-being and waste to determine which man-made laundry technology women would (agree to) use.

A wringer washing machine consists of a steel tub, either galvanized or porcelain enameled, upon which the wringer, a pair of wooden or rubber rollers, is mounted. An electric or gas motor suspended beneath the tub drives an agitator to move laundry through the wash water and revolve the rollers, clamped in tension, to express water from the goods being laundered. The machine was not self-acting. The tub was filled by the operator from a hose or bucket with water heated to the required temperature and then soap or its successor, detergent, and the clothing and linens were added. The woman operating the machine filled a separate tub or pair of tubs with rinse water and then manually lifted the items being washed from the soapy water. She fed them individually through the wringer into the rinse tubs in turn, moving the clothing through rinse waters with a stick. At each rinse she again lifted each piece by hand from the water. After the last rinse she guided the completed washing once more through the wringers, this time into a basket to be carried to the line to dry. After being used for several loads, the soapy water was either siphoned from the tub or disgorged into a floor drain. This process was hard on women's hands and their backs, and except for the ten or so minutes when the agitator was running, required the operator to be actively at work. All in all, this does not seem a technology to inspire devotion among its users.

But by comparison with the technology it replaced in most Canadian homes, the wringer washer was a real improvement. You definitely noticed the difference, Lily Hansen recalled. "I wasn't very good at scrubbing clothes on the washboard, and wringing them at all. You know, you're trying to wring sheets." "When my kids complained about the inconvenient malfunctioning wringer," Martha Watson wrote, "I told them they didn't know when they were well off."¹⁶

¹⁶In 1993 and 1994, through columns in *Victoria* and *Vancouver*, British Columbia, newspapers I recruited twenty-three women, married between 1945 and 1955, to interview about the furniture and equipment they used in their homes up until 1968. These columns were picked up by national news services, and I received additional letters from across the country in response. All interviews were tape-recorded and then transcribed. The interview transcripts and letters will be deposited in the Simon Fraser University Archives, Burnaby, British Columbia. Lily Hansen (pseud.) interview by author, New Westminster, BC, May 25, 1994; Tina Wall (pseud.) interview by author, Victoria, BC, June 16, 1994; Martha Watson, Alma, Ontario, letter

But few denied the limitations of the technology. In rural homes, the machine was stored outside and in winter had to be dragged into the kitchen before washday could begin. In city homes the wringer washer was usually in the basement, and because the machine was not self-acting, "You were running up and down stairs all morning doing this washing." In machines without pumps, "getting the water out of these big tubs, it was heavy work." Even in the best of circumstances, with a nearby pair of concrete tubs, separate hoses from hot and cold taps, and a mechanical siphon to empty the tub, the routine—washing white, colored and then heavily soiled work clothes in sequence, and returning each load in turn to the machine tub for rinsing with the aid of the agitator—was physically demanding. Clothing with buttons or zippers and larger linens had to be folded carefully while still soaking wet before they could be passed through the wringer. Metaphorically, many reported, doing laundry "was a pain."¹⁷

The machines also could cause more literal discomfort. The early wringer rollers were turned manually with a crank, but by the 1950s most rollers were rotated by the gas or electric engine attached to the machine. A woman who had turned on the powered rollers, and was working close to them watching for exposed buttons or trim, might find she had one hand being drawn through the wringer and the other ill-positioned to reach the release switch. Removing rings before starting the wash could reduce potential damage for women, but children's fascination with the machine remained a concern. Several women reported rescuing their youngsters' limbs from the wringers, and giving thanks that "little kids, you know, their bones are soft." Longer term, family members speculated that their mother's arthritis was linked to the many hours in cold basements, standing on a wet floor, woman-handling the wash.¹⁸

to the author, July 24, 1993; Irene Newlands, Surrey, BC, letter to the author, October 12, 1993.

¹⁷ Allison Simpson, interview by author, Delta, BC, May 18, 1994; Joan Coffey, interview by author, Coquitlam, BC, May 17, 1994; Mary Paine (pseud.) interview by author, Delta, BC, May 17, 1994; Patricia Cliff, interview by author, Victoria, BC, June 16, 1994; Marjorie Barlow, interview by Margaret-Anne Knowles, North Vancouver, BC, March 3, 1994; Lynn Stevens, interview by author, Langley, BC, May 26, 1994; Nettie Murphy, interview by author, Mission, BC, November 24, 1994; Gerry Kilby, interview by Margaret-Anne Knowles, Vancouver, BC, February 1, 1994; "Better Care Longer Wear," *Canadian Homes and Gardens*, October 1950: 68–69; Jane Monteith, "Planning a Laundry for Today and Tomorrow," *Chatelaine*, February 1949: 37.

¹⁸ Paine, interview; Simpson, interview; Pam McKeen, interview by author, Victoria, BC, June 15, 1995; Winnifred Edwards (pseud.) interview by author, New Westminster, BC, June 9, 1994. *Chatelaine*, the major Canadian women's magazine, noted as

TABLE 1
CANADIAN HOMES HAVING POWERED
WASHING MACHINES (%)

	Electric Wringer	Automatic
1960	73.9	12.1
1961	71.7	14.2
1962	70.1	16.5
1963	68.5	18.3
1964	65.9	20.7
1965	63.1	23.0
1966	59.4	25.6
1967	55.2	29.9
1968	51.6	32.0

SOURCE.—Dominion Bureau of Statistics, *Household Facilities and Equipment*, 1951, 1953–68.

Yet for all this, the transition from wringer to automatic technology was not swift in Canada. Allison Smith, a Commerce graduate from the University of Alberta, spent the fifties in remote northern villages where her husband was posted as a Royal Canadian Mounted Police officer. In winter she melted ice for the wash on a wood stove, brought the water to a boil in her electric kettle, regretting her accountant's habit of counting as her sons' fifty-four diapers went through each stage of the wash and out onto the line. In her Meadow Lake, Saskatchewan, kitchen in 1955 she tacked up a picture cut out of a magazine of a Bendix duomatic. Four years later she returned to urban life of modest prosperity, but not until 1973 did she acquire an automatic washing machine.¹⁹

To understand why, right up until the mid-sixties, more Canadian women each year bought wringers than automatics, why more considered the wringer the proper machine for the job of doing the wash (see table 1), we need to look beyond the relative convenience of the machines. We need to consider the broader context in which the consumption decision was made—what Ruth Schwartz Cowan has called the consumption junction.²⁰ The washer was not a single

advantages for automatic over wringer machines in November 1951 that “your hands never touch the water; weight of wet clothes does not have to be lifted up and down; no dripping water to clear up afterward,” and emphatically, “no worry about children playing around the automatic machine.”

¹⁹Simpson, interview.

²⁰Ruth Schwartz Cowan, “The Consumption Junction: A Proposal for Research Strategies in the Sociology of Technology,” in Wiebe K. Bijker, Trevor Pinch, and Thomas P. Hughes, eds., *The Social Construction of Technological Systems: New Directions in Sociology and the History of Technology* (Cambridge, Mass., 1987), pp. 263, 278.

machine but an integral part of the mechanical system of the house. The buying decision was similarly complex and political. In the home, major household purchases had opportunity costs. They presented opportunities to some household members and denied them to others. Within the Canadian political economy, wringer and automatic machines had very different locations. Wringer and automatic machines both washed clothes, but each of the technologies was built upon and had built in distinct assumptions about the relationships between machines and other resources, both human and natural, made in response to their succeeding contexts, assumptions to a degree coherent and common among technologies of their time, as we think of people as bearing affinities of a shared generation. These differences were readily apparent to women of the time, although they are more elusive to us now some forty years distant. To understand the choice between wringer and automatic technology we must disengage from the organizing assumption of Sigfried Giedion's then much-read and still much-cited *Mechanization Takes Command*, and feature a history of technology where a good deal more than machinery is at work.²¹

Addressing the Canadian Electrical Appliance Manufacturers in the spring of 1960, A. B. Blankenship, executive vice president of the leading Canadian consumer research firm, reminded his audience that the images consumers held of the household goods were the keys to understanding their market. He characterized these images dichotomously as "both rational and irrational . . . both real and imagined . . . both conscious and unconscious."²² Marketers promised to bridge these divides by "getting to really know" the woman longing for a better way to do the wash.²³ But marketers had another pressing promise to keep. Manufacturers wanted them to find, if need be to create in the market, that desiring female subject, that imagined woman, whom makers already implicitly had invented as they engineered the machines.²⁴ If sales were to be made, the

²¹Sigfried Giedion, *Mechanization Takes Command* (New York, 1948).

²²A. B. Blankenship, "The Consumer of the Sixties," in *Texts of Papers Presented at the 3rd Annual Appliance Marketing Seminar* (n.p., Canadian Electrical Manufacturers Association, June 9, 1960), pp. 33–34.

²³F. W. Mansfield, "A Discussion of the Principles of Marketing Research and How They Can Be Used by the Appliance Industry," in *The Next Fifty Years Belong to Marketing: Texts of Papers Presented at the 2nd Annual Appliance Marketing Seminar* (n.p., Canadian Electrical Manufacturers Association, June 3, 1959), pp. 6, 8, 13.

²⁴Sparke (n. 7 above), p. 6; Cockburn and Dilic (n. 8 above), p. 11; Frost (n. 8 above), p. 127, n. 44, citing Bruno Latour and Madeleine Akrich; Susan Ormrod, "'Let's Nuke the Dinner': Discursive Practices of Gender in the Creation of a New Cooking Process," in Cockburn and Dilic, pp. 42–58.

woman that makers theorized as using their machines must be made plausible to women actually doing the wash. Somehow what Robert Frost has called the symbolic and the functional or material sides of the machine had to be made to dwell as happy complements in the laundry rooms of the nation.²⁵

Fifties advertisements for wringer washers achieved this symbolic and functional resolution relatively readily by emphasizing tradition, for the firms which made wringers were venerable southwestern Ontario and Ottawa Valley manufacturers, begun as foundries and boilerworks in the 1840s and 1850s. The nameplates affixed to their new washers—McClary, Easy, Beatty, Connor, Clare—were familiar emblems from the fronts of woodstoves and the casings of sink-side kitchen pumps. Thus the ads noted that “McClary quality” had been “famous for more than 100 years,” that Connor had long been a Canadian favorite. Mother and daughter frequently were featured together, their gazes both fixed upon a gleaming new machine—a sensible depiction, given the operator attention the wringer washer required. Beatty experimented with pastel yellow, blue, and green machines in 1955, making the machines themselves imagined women by pitching the new model as “An Old Friend in New Dress” (fig. 1). The same firm struck the combination expected to sell wringers best with their 1958 Copperstyle, a modern wringer clad in the same heat-conducting metal which had sheathed 19th-century stovetop laundry boilers. “Mothers of all ages choose Beatty Copperstyle,” ads proclaimed, as a daughter wearing borrowed high heels hurried to join her smiling mother and applauding grandmother in an admiring circle around the washer (fig. 2).²⁶

With automatics the marketer’s task was more vexed. Most potential buyers of automatics already owned a functioning washing machine, so that as Susan Strasser has argued in the U.S. case, for the first time the merchandiser was attempting to persuade customers “to move up from an old-fashioned appliance to the newest latest kind, replacing machines that worked perfectly well.”²⁷ The wringer washers in most Canadian households in the 1950s were relatively new and highly prized. Many campaigns for automatics thus emphasized style rather than function, and appealed to (or for) a style-

²⁵Frost, p. 129.

²⁶“The Beautiful McClary Washer,” *Chatelaine*, April 1951, inside front cover; the Connor pitch is described in “Hookers Used in Connor Campaign,” *Marketing*, May 15, 1954: 16; “Housewives Like Color Washers, Beatty Adds Color Sales Curve with Cromatic Line,” *Marketing*, November 11, 1955: 20; “Mothers of All Ages Choose Beatty Copperstyle,” *Chatelaine*, March 1958: 53.

²⁷Strasser (n. 4 above), p. 267.

**AN OLD FRIEND
IN NEW DRESS**

Beatty

**DOUBLE TUB
STAINLESS STEEL
WASHERS**

*Canada's most
popular washers*
NOW SOLD WITH

**TWO-TONE
EROMATIC
COLOUR CHOICE**

Available now in long dark and two-tone colour
choice, a new famous Beatty Washers.

There is a choice of colours (including silver) —
all NEUTRAL, none to go with any other
colour scheme. The trend now is toward colour. Our
new EROMATIC colour choice is changing a
daily change.

The famous "Pump-Tone" handle is likewise pro-
tected by the new EPON treatment — prevents
rust and corrosion.

All other features of Canada's best selling washer
have been kept:

- (1) CLOTHES ACTION AGITATOR — moves
clothes, not just water.
- (2) Indestructible Iron Winger lever trigger, safety
device.
- (3) 4-part Gear-Drive Mechanism. No belts. Self
lubricating drive.

**THERE ARE MORE BEATTY WASHERS
IN USE IN CANADA THAN ANY OTHER MAKE**



**NOW 6 Year
Guarantee**

Beatty Bros. Limited

Established 1894

Sales John, N.E. Montreal, Fort St. John, Winnipeg,
Edmonton, S.K. Representative: McLaughlin,
McJury & Poir Limited, Vancouver.

FIG. 1.—“An Old Friend in New Dress,” *Marketing*, November 22, 1953, p. 20

conscious consumer. Stanley Randall, president of the Easy Washing Machine Company, and later an influential Ontario cabinet minister, asserted that women bought washers for three reasons: “1. appearance, 2. features, 3. price. Women will pay \$40 to \$50 more for an appliance if it appeals to the eye; if you don’t sell eye appeal, you don’t sell.” “The Canadian housewife likes gadgets,” he added, likening Easy’s latest three-dial, twenty-one-setting automatic to a pinball machine, “it lights up and signs off.”²⁸ Certainly Randall,

²⁸ “The Easy Way to Sell—Coax Man on Store Floor to ‘Romance’ Your Product,” *Marketing*, August 30, 1957: 20–22.

who had been a traveling salesman for Easy during the depression of the 1930s, would have known the importance of proper functioning in a washer, would have known that the machine was first a tool rather than an entertainment. He emphasized gadgetry and eye-appeal, and was silent about function, because in glamour lay the automatic's indisputable advantage over the wringer.

But creating a taste for glamour in the laundry room was a hard sell, as R. J. Woxman, president of American Motors' appliance subsidiary Kelvinator, well knew. If only a domestic appliance family washer "was parked in the driveway," he noted wistfully, "it would be replaced more frequently."²⁹ The manager of the Ontario Appliance Dealers Association fantasized about annual gala evenings to which an audience clad in evening dress would be summoned by engraved invitation, the presentation of each jewel-like new model invoking admiring applause—a fantasy world where women would value washers, as they valued jewelry, for their appearance and symbolic references alone. This was a possibility which, as he stepped down from the podium, he acknowledged was far-fetched.³⁰

Marketers met the concerns and fantasies of real Canadian women best with ads which highlighted the self-acting capacities of the automatic machine (fig. 3). Unlike the displays for contemporary wringers (which showed women looking toward the machines), the graphics in advertisements for automatics more frequently showed a woman turned away from the washer, to smile not at the machine but at the child with whom she was playing or the husband with whom she was about to depart.³¹ The claim that the automatic "ended washday" by making it more feasible to do "two or three small washes through the week" may have been the Hobson's choice Susan Strasser describes, between "a weekly nightmare" and an "unending task."³²

²⁹R. J. Woxman, "The Consumer Needs and Wants—How Can the Appliance and Home Entertainment Industry Meet the Challenge?" in *Proceedings 5th Annual Appliance Marketing Seminar* (n.p., Canadian Electrical Manufacturers Association, May 17, 1962), p. 41.

³⁰A. L. Vincent, "The Retailers Viewpoint on Marketing Appliances," in *The Next Fifty Years Belong to Marketing* (n. 23 above), pp. 53–54.

³¹"Change Washday into Playday! The New Easy," *Canadian Homes and Gardens* (CHG), November 1956, 45; "Now the New Beatty Washer Saves You," CHG, June 1952, 34; "Bendix Introduces '53 Line," *Marketing*, January 1953, 1; 1958 ad for automatic washer showing mother with toddler in high chair, washer behind them and cover line, "Less time for your laundry, more time for your family," Live Better Electrically file 570, Ontario Hydro Archives.

³²Marie Holmes, "Look What's Happening to Washday," *Chatelaine*, May 1953, 78; Strasser, p. 268.



Mothers of all ages choose

Beatty COPPERSTYLE

Like mother—like daughter. Both know that Beatty makes the finest washers, and today's leading wringer washer is the Beatty Copperstyle.

A silhouette of modern fashion design brought to glowing life with ever-pleasing copper and white. Here is a washer of unsurpassed beauty and quality to complement any home decor.

Only the Beatty Copperstyle can give you those advanced washing features

**CLEAN CLOTHES IN
JUST 4 MINUTES**

In the time it takes to read every word of this advertisement twice, your clothes would be washed cleaner than ever before.

**ONE CENTRAL CONTROL
PANEL**

Simple to set Automatic Timer, Pump and Agitator controls are grouped on one central panel.

LASTS A LIFETIME

All metal surfaces are lifetime protected from rust by "Epon" undercoating. Stainless Steel inner tub stays bright and free from rust forever.

**AUTOMATIC SAFETY
WRINGER**

A light pull on the clothes or push of the wringer AUTOMATICALLY the pressure releases and rolls stop BOTH AT THE SAME TIME.

Other Beatty washers are available in a choice of colors to blend or contrast with any home decoration.



"Beatty"—one name for 8 feature-packed appliances. Washers, dryers, ironers, ranges, refrigerators, freezers, vacuum cleaners, polishers.

There are more
Beatty
WASHERS
than you can imagine.
See the Copperstyle soon at your nearest Beatty dealer

FIG. 2.—“Mothers of all ages choose Beatty Copperstyle,” *Chatelaine*, March 1958

Change washday into playday!

THE NEW
EASY
Combination
AUTOMATIC
WASHER-DRYER

FIG. 3.—“Change washday into playday!” *Canadian Homes and Gardens*, November 1956, p. 45

Yet Ontario Hydro's promise, "a few things each day keeps 'washday' away," of a machine which would "do all the hard work" of the wash and promote busy mothers to the position of "supervisor in the laundry department" could not but tempt women in the home.³³

Visions of automatics must have danced in the heads of most mothers of infants, for pungent pails of diapers could not be held for a single weekly washday. The woman who owned only two dozen diapers would have been washing them most days by hand. Whatever one's reservations about owning an automatic, who would not have been ready and willing to dream the advertiser's fantasy of a magical machine which all on its own made dirty into clean? Thus, many ads for automatics targeted new mothers. To launch their new washer-dryer set in 1953, Westinghouse worked on the nightmares raised by the thought of arriving twins. Once again the machines were imagined as, and introduced to consumers as, people, in this case as baby twins. This "Blessed Event" campaign used ads showing storks delivering new washer-dryer twin sets (fig. 4). Dealers provided birth certificates, tastefully printed in black and gold, to each buyer who took the mechanical twins home. The firm fused the images of the twins they had manufactured and the twins who would create dirty diapers, by offering a free pair of machines to every mother in Canada who bore twins on the launch day of the new model, the 17th of March of that year.³⁴ There were echoes of the 1930s Stork Derbys and the celebrated Dionne Quintuplettes in the Westinghouse letters to 15,000 doctors, hospitals, and nurses' associations, asking for their intervention to discover lucky candidates and authenticate the births. But the campaign captured well the shared current of pleasure and desperation which flowed about mothers in the midst of the Canadian baby boom. The campaign would also have appealed to a singular predisposition among contemporary manufacturers, at once to feature users in the image of their machines, and to feature the machines they made as human.³⁵

³³ Ads for automatic washers 1959 and 1960, Live Better Electrically file 570. 1, Ontario Hydro Archives. The advantages Australian women found in daily laundry are described by Keren Reiger, "At Home with Technology," *Arena* 75 (1986): 115–16, 117–18.

³⁴ "Twins for Twins' Promotion," *Marketing*, February 21, 1953, 1; "Practical and Emotional Appeals Feature This Consumer 'Contest,'" *Marketing*, March 21, 1953, 2; "Laundry Dealership Told 'Babies Mean Business,'" *Marketing*, September 5, 1958, 46.

³⁵ Marshall McLuhan ponders this conflation in *The Mechanical Bride: Folklore of Industrial Man* (New York, 1951). Dianne Newell pointed out to me this aspect of these essays, particularly apparent in McLuhan's choice of illustrations; see similarly, Richard Sennett, *The Fall of Public Man* (New York, 1974), p. 20; Mariana Valverde, "Representing Childhood: The Multiple Fathers of the Dionne Quintuplettes," in

Most advertisements for washers addressed a female audience. Men were invoked infrequently in any capacity in ads to sell wringers, but they began to appear now and then in the late 1950s in campaigns for automatics. The man in a checked hunting shirt an Ontario Hydro ad showed loading an automatic washer, “so easy even a *man* can do it,” had only a walk-on part, for the accompanying text quickly turned to address a female reader. But Inglis pitched ads to men twice, first in the “Wife-Saver” campaign of 1958, which attempted rakish double entendre, urging husbands to “save” their wives by “trading them” in on new Inglis washers and dryers. The ads the next year—“Is your Bride still waiting for her Inglis?”—proceeded more cautiously, combining copy written for husbands—“We know you are just as anxious as any husband to save work for your bride but honestly . . . hasn’t the family wash been a labour of love too long?”—with an illustration of a young bride holding a large laundry basket rather than a bouquet, intended to catch women’s attention (fig. 5). The timing is interesting here. Men portrayed as patriarchs and providers were targeted directly as buyers in 1958 and 1959 as a recession deepened in Canada and manufacturers found sales in replacement markets more difficult to make.³⁶

The differences between the imagined users featured in advertisements for wringers and automatics mirrored differences between the makers of the two machines. Almost every wringer washer used in Canada was Canadian made. The leaders in the sector, such as Beatty, Connor, and Easy, had begun manufacturing wringers early in the century as an extension of their long-standing specializations in water pumps and boilers. The first automatics sold in Canada were imported from the United States, and the Canadian manufacture of automatics quickly was dominated by the branch plants of American firms. The leaders in this sector had diversified either like Westinghouse and Canadian General Electric from making electrical apparatus for industry, or like Kelvinator and Frigidaire, from the mass production of automobiles. A few large American subsidiaries dominated the automatic side of the industry. The makers of wringers were smaller, more numerous, and Canadian owned.³⁷

Carol Smart, *Regulating Women* (New York, 1992), pp. 119–46; special Dionne issue of *Journal of Canadian Studies*, Winter 1994–95.

³⁶1959 automatic washer ad, Living Better Electrically 570. 1, Ontario Hydro Archives; “Buy a Washer, Save a Wife: Promotion Soaps Up Husbands,” *Marketing*, July 11, 1958, 30; “After the Wedding, a Washer Inglis Ad Aimed at Husbands,” *Marketing*, April 3, 1959, 6. The latter campaign ran in both *Maclean’s* and *La Patrie*. The *Marketing* stories describe the advertising campaign and the advertiser’s rationale for its design.

³⁷In 1954 the four largest makers of automatics commanded 91 percent of the market. That year the four largest firms producing wringers made only 52 percent

Wringer manufacturers in Canada in the 1950s built washing machines using the same labor-intensive batch production methods they used to make water pumps and boilers. These manufacturing processes yielded machines which were heavy and thus durable, simply assembled and thus simply repaired. There was little outsourcing; as the technology had been relatively static, few parts were covered by proprietary rights. Still, wringers could be made efficiently in plants producing 10,000–25,000 machines per year, so that economists estimated in the late fifties and early sixties that the Canadian market could have supported at least nine and possibly as many as twenty-two wringer washer manufacturers.³⁸ Indeed, the wringer—sold with twelve-year guarantees by manufacturers who had made their reputations handling water—became something of a Canadian specialty, and through the mid-sixties Canadian manufacturers reported strong export sales into United States and overseas markets.³⁹

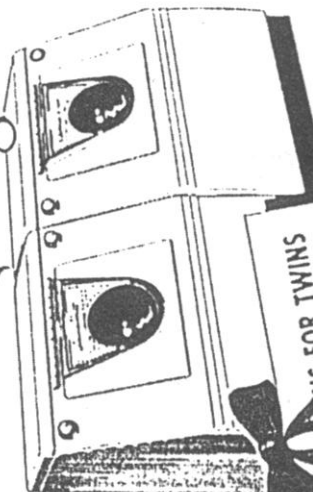
In its manufacture the automatic washer was kin not to the water pump but to the other white boxes, the stove, the refrigerator, the dryer, which in their succeeding seasons kept assembly lines steadily producing. In contrast to the batch methods by which wringers then were made, mass production used less labor and fewer materials, to create lighter, less resilient automatic machines. The automatics' merchandising emphasis on style was linked to this product engineering decision, to build a machine which could be sold more cheaply but would need more frequently to be replaced, to stimulate the mass consumption which would sustain mass production. One analyst using 1960 data estimated the minimum efficient size of a

of the machines offered for sale. See Clarence Barber, *The Canadian Electrical Manufacturing Industry*, Royal Commission on Canada's Economic Prospects (Ottawa, September 1956), p. 43; U.S. Department of Commerce, *Major Household Appliances: Production, Consumption and Trade—Selected Countries* (Washington, D. C., 1960), pp. 9, 14; on Beatty's history in the field see "The Costs Are the Same but Value Greater Now," *Financial Post*, May 17, 1958, 28; "Major Appliance Industry Plan," Domestic Appliance Plan 1965–8, Electrical and Electronics Branch, RG 20 1755 404/34, NAC; Beatty Brothers EFIR, October 22, 1963, RG 20 763 NAC; Kelvinator Canada EFIR, April 1956, RG 20 773 NAC.

³⁸ Barber, pp. 29, 51–52, 54; H. C. Eastman, "Electrical Appliances Industry," p. 5, in RG 20 1755 8001-404/35 NAC.

³⁹ Barber, p. 10; Beatty Brothers, interview with R. L. Kerr, EFIR, May 20, 1964, RG 20 763 NAC; Canadian Westinghouse, interview with C. H. McBain and K. E. Waugh, EFIR, June 6, 1962, RG 20 767 NAC. J. H. Connor and Son produced wringer machines in two versions, one for rural and northern markets using cast iron, steel, and heavy aluminum for maximum durability at a higher price, the other using more light metals and plastics for urban users. H. E. English unpublished report on visit to J. H. Connor and Son Ltd., April 12, 1956, Royal Commission on Canada's Economic Prospects, 3-13-8, RG 33 52 NAC.

the New! Deluxe **Westinghouse LAUNDRY TWINS**
bring **NEW** freedom!



TWINNERS FOR TWINS
 ONE Blessed EIGHT DAY
 FREE on the ground purchase of each set of 7-10 lbs.
 here available in Canada on March 1, 1976, 1977.
Westinghouse
 will deliver, absolutely free a wonderful set of
1975 LAUNDRY TWINS
 for full details see your Westinghouse dealer

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ONLY THE TWINS HAVE ALL THESE FEATURES

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to help the people of the world to understand the meaning of the word "peace".

Journal of Interpersonal Violence 26(10)

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YOU CAN BE SURE... IF IT'S Westinghouse

FIG. 4.—“Blessed Event!” *Marketing*, March 21, 1953

Is your Bride still waiting for her INGLIS?



The bride is standing in front of a display of Inglis refrigerators. The refrigerators are arranged in a row, with some having their doors open to show the interior. The bride is looking towards the camera, and her expression is one of anticipation.

Below the headline, there are several columns of text, likely describing the features and benefits of the Inglis refrigerators. The text is arranged in a grid-like fashion, with each column containing a different set of information. The text is in a serif font, which is typical of mid-20th-century advertising.

At the bottom of the advertisement, there is a large, stylized logo for "Inglis". The logo is written in a bold, cursive font, and it is set against a dark background. Below the logo, there is a small line of text that reads "Inglis Sales Corp. of America, Inc. New York, N.Y."

FIG. 5.—“Is your Bride still waiting for her INGLIS?” *Marketing*, April 3, 1959, p. 6

major appliance plant at 500,000 units per year.⁴⁰ As Gomez found in her study of the Spanish industry, longer production runs are still seen as key to least-cost production of automatic washers.⁴¹

But these economies of scale in mass production were not equally accessible to all producers. The whole Canadian market would not have supported a plant making a half million appliances per year. Equally important, the lower input costs for automatics that U.S. manufacturers passed on to their American consumers did not prevail outside the United States. Automatic washer technology had improved rapidly during the 1950s, but much of this knowledge in the fifties and sixties was still proprietary. Without adequate research and development capacity of their own, U.S. subsidiaries in Canada and Canadian independents had access to these refinements only by purchasing licenses to manufacture or by importing finished parts.⁴² The long-run effects of licensing arrangements on manufacturing viability are plain in David Sobel and Susan Meurer's recent *Working at Inglis: The Life and Death of a Canadian Factory*.⁴³ Inglis, Whirlpool's Canadian licensee, ended their thirty-year association with rights to produce only an obsolete machine. Buying components abroad immediately raised prices. Imported finished parts, valued in 1955 at \$2.4 million U.S., made parts bills for a Canadian automatic 10 percent higher than those for an American machine in that year, a difference which persisted through the 1960s.⁴⁴ The tariff on washer parts was 22.5 percent. Even in the late sixties, when Canadian automatics finally were selling well, they cost 37 percent more than similar machines being sold in the United States.⁴⁵ The

⁴⁰Eastman, pp. 5, 8, 12; comments on Eastman by G. Q. Rahm, Chief, Appliance and Commercial Machine Division, Trade and Commerce, February 4, 1966, and by Ralph Barford, General Steel Wares, February 23, 1966, RG 20 1755 P8001-404/35 NAC. There is a longer discussion about optimal plant size by Barford, of Beatty and General Steel Wares in P. C. Fedenburgh, site visit, January 5, 1967, RG 20 P8001-270/G47 NAC. Plants that used more outsourcing—that is, purchased rather than produced parts—would have been efficient at a smaller scale, but here the national boundary loomed as an obstacle, for even firms with Canadian subsidiaries confined parts manufacture to the United States.

⁴¹Gomez (n. 12 above), p. 132.

⁴²"Laundry appliance firms sign agreement," *HRG*, May 15, 1959); P. C. Fedenburgh, "Comparison of US and Canadian Major Appliance Plants," March 22, 1968, p. 23, RG 20 1755 8001-404/41 vol. 2 NAC.

⁴³David Sobel and Susan Meurer, *Working at Inglis: The Life and Death of a Canadian Factory* (Toronto, 1994), pp. 115, 141, 249–53.

⁴⁴U.S. Department of Commerce, *Major Household Appliances* (n. 37 above), p. 14; Barber (n. 37 above), p. 62; "Major Appliance Study," chap. 3, input prices, RG 20 vol. 1755 P8001-404/46 NAC.

⁴⁵Fredenburgh, p. 22.

product engineering and merchandising of automatic washers presumed mass consumption, that washers could be offered relatively cheaply so that both a conversion and a replacement market would rapidly develop. But the costs of carrying the technology across national boundaries, which made automatic washers relatively more expensive in Canada (and other jurisdictions) than in the United States, made automatics implausible and impractical as objects of mass consumption. For makers, the washer was an object for sale, reaching out toward an imagined consumer. For prospective users (who may or may not have featured themselves as consumers), neither the price nor the promise was as alluring as the makers assumed.⁴⁶

For most of the forties, washing machines of any sort were woefully elusive commodities in Canada. Sufficient metals were released for civilian requirements to produce 126,000 new washers between 1942 and 1945, but that many machines (purchased before the depression began) were wearing out each year by the end of the war.⁴⁷ In addition there were 800,000 more households in Canada by the end of the decade.⁴⁸ Already in late 1944, 83 percent of housewives who recently had set up housekeeping reported they had tried and been unable to procure a washing machine.⁴⁹ By the end of 1945, unmet demand would have exceeded seven years' production at peak pre-war rates.⁵⁰

But reconversion to peacetime production was slowed in Canada by the exchange crisis that followed the war. Restrictions on imports and access to materials were more prohibitive for firms making consumer rather than producer goods, and goods for domestic consumption rather than export.⁵¹ Credit controls designed to dampen consumer demand and applied to washers until 1953.⁵² In the late forties

⁴⁶For a discussion of the different ways in which manufacturers using mass and batch production methods feature and attend to consumers see Philip Scranton, "Manufacturing Diversity: Production Systems, Markets, and an American Consumer Society, 1870–1930," *Technology and Culture* 35 (1994): 476–505.

⁴⁷The age of existing stocks—27 percent dating from the 1920s and 30 percent from the early thirties—was estimated by the Wartime Prices and Trade Board (WPTB) research and statistics division using a sample of 6,524 interviews in the summer of 1940: Wartime Prices and Trade Board, RG 64 1452 A-10-9-4 NAC.

⁴⁸F. H. Leacy, *Historical Statistics of Canada*, 2nd ed. (Ottawa, 1983) A248.

⁴⁹WPTB, "A Survey on Household Necessities," pp. 2, 8, RG 64 1460 A-10-9-23, NAC; Lily Hansen, interview (n. 16 above). Hansen remembers buying one of the last washers at Woodward's department store in 1943.

⁵⁰"Production of Durable Goods," August 1946 RG 46 WPTB 1465 NAC.

⁵¹Joy Parr and Gunilla Ekberg, "Mrs. Consumer and Mr. Keynes in Postwar Canada and Sweden," *Gender and History* 8 (1996): 212–30.

⁵²Department of Finance, "Control of Consumer Credit, PC 1249," March 13, 1951, RG19 E2C vol. 32, NAC.

a woman who wanted a washer had to wait her turn on a dealer's lengthy list. Joan Coffey did get a wringer machine in 1947, when her anguished letter struck a cord with an Eaton's department store manager. "They were just starting to make them and you went on waiting lists for years . . . all the neighbours were aghast. They couldn't figure out how I could get a washing machine. And that [machine] was the love of my life."⁵³ Many other women turned to commercial laundries, at least for large items such as tablecloths and sheets. This was a sensible way to save their own labor, a reality which caused appliance salesmen considerable dismay.⁵⁴ But rather than paying to have the family wash laundered, dried, and pressed, to return home from the market tied in neat paper packages, women from both professional and working-class households reported using the "wet wash" service, which returned the laundry damp, to be dried and ironed at home. This suggests that in Canada, as in Britain, the issue was not laborsaving alone. The lingering array of post-war shortages—of housing with decent plumbing, of washing machines, of cash—made them seek some compromise which would balance the pressures these various scarcities placed on the household.⁵⁵

Early automatics often were bought by men as gifts for their wives. "To purchase gadgets that relieve . . . drudgery and thus promote domestic affection," as Marshall McLuhan observed in 1951 in *The Mechanical Bride*, could be seen as a duty, a species of moral choice. The other leading male commentator on technology of the day, George Grant, was generally critical of American influences upon Canada and wary of transnational technology as a threat to liberty. But he made an exception for "the wonderful American machines" he believed let his wife, Sheila, lead a freer life, acknowledging that "the practical worth of modern technology" was demonstrated "every time Sheila washed the clothes in her machine."⁵⁶

⁵³ Coffey, interview (n. 17 above); Watson, letter to author (n. 16 above).

⁵⁴ See the warnings to salesmen in "Charting Course for Selling," *Marketing*, November 30, 1946, 2, and "Selling Via Demonstrations," *Marketing*, July 30, 1949, 8, 12.

⁵⁵ Cliff, interview (n. 17 above); Margaret Shortliffe, Victoria, BC, interview by author, June 16, 1994, reporting about Kingston, Ontario; Edwards, interview (n. 18 above); Murphy, interview (n. 17 above). See Zmroczek (n. 7 above), p. 183, on the British equivalent of wet wash called bag wash. A recent discussion of commercial laundries in the United States is Roger Miller, "Selling Mrs. Consumer: advertising and the creation of suburban socio-spatial relations, 1910–1930," *Antipode* 23 (1991): 278.

⁵⁶ McLuhan (n. 35 above), pp. 32, 33; William Christian, *George Grant* (Toronto, 1993), pp. 177, 250. Grant's best-known writings are *Lament for a Nation: The Defeat Of Canadian Nationalism* (Princeton, N.J., 1965) and *Technology and Empire: Perspectives on North America* (Toronto, 1969).

The men who presented their wives with the first automatics were often professionals—geologists or engineers worried about the peripatetic lives their careers imposed upon the family, or university professors who encouraged their wives' dedication to pursuits other than housewifery. They had the income to afford the automatic, enough control over the family budget to make the decision alone, the conviction that manufacturers' promises for the machine would be fulfilled. Beverly Newmarch, in 1948 the wife of a newly hired geology Ph.D. in a British Columbia coal mining town, remembers how she came to have an automatic in her company duplex: "Chuck decided that with what I had had to use, I should now have an automatic. He began to look at want-ads! I was horrified, since automatics were so new, I didn't want to start out with one that had experience! He persevered, however, and found himself a new Bendix, still in the wooden crate. The American consul had brought it up to Victoria and for some reason or other they had not been able to obtain permission to install it in their home—something about the plumbing not being adequate." Ann Brook, married to a navy man frequently away from home, returned from work one day to find the automatic she had declined ("Hum, don't need an automatic washing machine, who needs an automatic washing machine?") already installed. Her husband had conferred once more with their customary appliance salesman, Mr. Beeton, and he and Mr. Beeton had agreed, "maybe you should try it and see." Mrs. Brook did not decline the gift.⁵⁷

If for the men who bought them in the forties and early fifties automatic washers were unambiguously desirable objects which bespoke affection and a better life, for children they are recalled as mesmerizing entertainments. The rare front-loading automatics somewhat resembled the even rarer televisions about which most Canadian youngsters had only heard tell before 1955. Most women who got automatics in the early postwar years tell stories of lines of small spectators gathering to watch the wash.⁵⁸ Women as equipment users had a more complex appraisal to make. Some were persuaded early on. Margaret Shortliffe had first seen an automatic Bendix at Cornell University in 1939, noted the merits of its alternating drum

⁵⁷ Shortliffe, interview; Ann Brook, interview by author, Abbotsford, BC, November 24, 1994; Susan Taylor (pseud.), interview by author, Victoria, BC, May 10, 1994; Joan Niblock, interview by author, Langley, BC, May 25, 1994; Bev Newmarch, Calgary, Alberta, letter to author, September 6, 1993.

⁵⁸ Olive L. Kozicky, Calgary, Alberta, letter to author, September 14, 1993; Newmarch, letter to author; Elizabeth Perry, Calgary, Alberta, letter to author, September 12, 1993.

technology, and refused agitator substitutes, either wringer or automatic, washing by hand until her husband got a Bendix to Kingston, Ontario, in 1946. Winnifred Edwards, like Shortliffe, got along without a machine until the kind of equipment she had seen in hospital laundries was available for sale in 1952. The consequences of investing in a particular durable tool delayed their purchase of any machine, as it delayed many women's purchase of automatics, for deliberating on an investment takes longer than choosing to consume an object of either personal or altruistic desire.⁵⁹

In such deliberations, price is plainly an important factor. Automatic washers cost more than wringer machines. In 1950, the gap was wide. Standard wringers could cost as little as \$90, some automatic models as much as \$370. In 1956 the *Chatelaine* Institute reported best-selling wringer prices ranging from \$129 to \$259, and automatics from \$325 to \$469. Over time the gap narrowed, but still in 1966 the average price of wringers advertised in Eaton's mail-order catalog was \$146; automatics at an average of \$234 cost half as much again.⁶⁰

This was not a negligible difference, particularly in the first decade after the war when couples were equipping homes for the first time. Personal incomes in Canada were not high in this period, in 1947–50 about two-thirds of incomes in the United States.⁶¹ Prices for Canadian consumer goods in nominal and real terms exceeded those in the United States. Hard choices had to be made. The consumer credit controls that applied to washers until 1953 required down payments of one-third and full payment within a year.⁶² Getting everything at once by running into debt was not an option. Deciding what to get first required considerable juggling. For how long should the household get by without a stove, a mechanical refrigerator, or a washer?

Historians of technology sometimes have been surprised by technological choices because they assumed that the choice was between two technologies for performing the same task, rather than among

⁵⁹ Shortliffe, interview; Edwards, interview; Liz Forbes, Duncan, BC, letter to author, November 1993.

⁶⁰ "Laundry's No Problem," *CHG*, October 1950, 91; "How to Choose Your Next Big Appliance," *Chatelaine*, November 1956, 22; Canadian General Electric, EFIR, June 9, 1965, RG 20 765 23-100 C27 NAC; Tanis Day, "Substituting Capital for Labour in the Home: The Diffusion of Household Technology," (Ph.D. diss., Queen's University, 1987), p. 185. The 1966 prices cited from Day are in 1971 dollars.

⁶¹ Jean Mann Due, "Consumption Levels in Canada and the United States, 1947–50," *Canadian Journal of Economics and Political Science* 21 (May 1955): 174–81.

⁶² Department of Finance, "Control of Consumer Credit" (n. 52 above)

possible mechanical and nonmechanical improvements. Economists have relied upon the simplifying assumption that like goods are only compared with like. For the economist, the only benefits the person making the choice weighs are his or her own. These assumptions about nonsubstitutability do not apply well to households, as feminist economists recently have demonstrated.⁶³ Buying a wringer rather than an automatic washing machine was a sensible economy. The savings, for example, would have bought a vacuum cleaner or a radio, and the wash would still be done. The washer was the one place in the basic household consumption package where there was a little discretion. Among the 8,611 Toronto women Eaton's interviewed about their purchases of furniture and appliances between January 1949 and August 1952, the amount paid for refrigerators (\$343–\$348) and for stoves (\$205–\$219) varied little. For washers the range was considerable. Women under twenty-four paid on average \$152, women over thirty-five on average \$188. More older than younger women were buying automatic machines. New equipment for keeping food cold and making it hot took a relatively fixed amount out of every household budget. A younger homemaker, with more household equipment to acquire at once, could more easily make do with a wringer washer, than do without a stove or a mechanical refrigerator.⁶⁴ The Central Mortgage and Housing Corporation surveyed 6,600 families who had purchased houses between January and May of 1955 in Halifax, Montreal, Toronto, Winnipeg, and Vancouver. The amount spent varied between cities, on stoves by \$62, on refrigerators by \$45, but on washers (on average the least expensive of the three appliances) by \$127. Only on washers could the new home buyers with the least to spend accrue appreciable savings.⁶⁵

Among the much smaller group of women with whom I spoke and corresponded, a similar pattern emerges. A washer was important,

⁶³Nancy Folbre and Heidi Hartmann, "The Rhetoric of Self Interest: Ideology and Gender in Economic Theory," in *The Consequences of Economic Rhetoric*, ed. Arjo Klamer (New York, 1988), pp. 184–203; Paula England, "The Separative Self: Androcentric Bias in Neoclassical Assumptions," in *Beyond Economic Man: Feminist Theory and Economics*, ed. Marianne A. Ferber and Julie A. Nelson (Chicago, 1993), pp. 37–53.

⁶⁴The least spent for refrigerators was \$342, the most \$353; for stoves the range was between \$205 and \$219, both narrower differences on larger sums than the \$35 gap for washers. "Purchasing of Furniture, Household Appliances and Home Furnishings—Toronto—By Age Groups, 1949–50–51 and 32 weeks of 1952," Market Research 1953–60 S69 v. 25, T. Eaton Company, Archives of Ontario.

⁶⁵"Purchasing of home furnishings and appliances by new home owners," Controller's Office, September 2, 1958, Series 165 Box 2 file 5.1, T. Eaton Company, Archives of Ontario.

often important enough to risk going into debt for, especially important once children began to arrive.⁶⁶ But the choice was not posed in the postwar years as between two laundry technologies, between an automatic and a wringer. Rather women spoke about the other tasks which might be mechanized and the other obligations of the home. The decision about a washing machine was part of these other decisions about equipping the household and the household's relationship to the wider world. Buying the automatic, the more expensive machine, when a cheaper satisfactory alternative existed could easily seem to foreclose more opportunities than it opened, to be less about liberty than constraint.

In rural homes, the needs of the barn and of the house had to be met from the same purse. Investment in labor-saving equipment for the farm took priority, partly because men made these decisions on their own.⁶⁷ Perhaps also, in some parts of Canada as in Iowa and the Palouse region of Idaho and Washington, women saw investments in farm equipment as saving domestic labor because they eliminated the need for hired men.⁶⁸ The priority of the barn is plain in the detailed study of 352 Ontario farm families Helen Abell conducted in 1959. On the most prosperous farms, where investment in all laborsaving equipment exceeded \$13,000, less than 10 percent of this investment was in domestic technology. Paradoxically and surprisingly, the proportion of the farm family's resources invested in household appliances rose among poorer farmers, to 20 percent for the house when all equipment was valued at less than \$7,000.⁶⁹ Because there were few satisfactory substitutes in domestic technology,

⁶⁶McKeen, interview (n. 18 above); Niblock, interview (n. 57 above); Coffey, interview (n. 17 above); Gerd Evans, interview by Margaret-Anne Knowles, Burnaby, BC, April 6, 1994; Mrs. A. B. Botham, Ganges, BC, letter to author, October 16, 1993; Hazel Beech, Lake Cowichan, BC, letter to author, July 22, 1993.

⁶⁷This seems to have been the case for Ontario in the 1950s. See Nora Cebotarev, "From Domesticity to the Public Sphere: Farm Women, 1945–86," in *A Diversity of Women: Ontario 1945–80*, ed. Joy Parr (Toronto, 1995), pp. 203, 207. In Quebec, aspiration for domestic comfort took greater precedence; Yves Tremblay, "Equiper la maison de ferme ou la ferme, le choix des femmes quebécoises, 1930–1960," *Bulletin de l'histoire de l'électricité* 19–20 (1992) 235–48.

⁶⁸Katherine Jellison, *Entitled to Power: Farm Women and Technology, 1913–63* (Chapel Hill, N. C., 1993), p. 109; Corlann Gee Bush, "'He Isn't Half So Cranky As He Used To Be': Agricultural Mechanisation, Comparable Worth, and the Changing Farm Family," in *"To Toil the Livelong Day": America's Women at Work, 1780–1980*, ed. Carol Groneman and Mary Beth Norton (Ithaca, N. Y., 1987), p. 228.

⁶⁹"Report of Findings Concerning Consumer Information; Crafts and Hobbies; Housing (The Farm Home)," Progress Report #7, "Special Study of Ontario Farm Homes and Homemakers 1959," pp. 11, 12, 28, AOS6076, Helen Abell Papers, University of Guelph Archives.

the least mechanized of farm families had to allocate the largest share of their equipment budget to the kitchen and laundry basics, at least in Ontario. Choosing a wringer over an automatic reduced these pressures and might, for example, have brought an electric cream separator into the kitchen.⁷⁰ In more highly capitalized operations, a farm woman may more readily have been able to justify the purchase of an automatic machine to free her for farm work outside the house. Jellison finds Iowa women used this argument in the 1950s. The same reasoning may account for why automatic washers more quickly became commonplace in the farms of Quebec, where dairy predominated, than in other Canadian markets.⁷¹

Both Patricia Cliff and Nettie Murphy linked their purchase of automatic washers to their participation in the work force. Cliff had twins in diapers, and was pregnant again, when she went by herself to Eaton's Warehouse in Victoria in 1960 and asked for "the biggest automatic tub you can give me." But she explained the decision by noting that she had worked for eleven years before the twins arrived, and thus had a bank account of her own. Murphy bought her first washer many years into her marriage, during a period when she had paid work. "That made a difference. When you work outside of the home and you have an income, you pack a little more clout."⁷² Manufacturers and marketers expected that wives in the work force would buy more automatics than women at home full-time. They assumed that two-earner households would have higher incomes, and that wage-earning wives would feel less "guilty" turning a part of the household budget toward "short-cuts" for themselves. But as Joan Sangster notes, in Canada in the 1950s and 1960s most married women in the labor force came from families in straitened circumstances. Buying an automatic, when for \$100 to \$200 less a wringer would do, seemed foolish to a woman earning just enough to make ends meet. One Canadian study explicitly addresses this question through a comparison of equal numbers of full-time and part-time wage-earning mothers and mothers at home full-time in Guelph,

⁷⁰J. K. Edmonds, "Keep a Sales Eye on the Farmer's Wife," *Marketing*, May 24, 1957, 28.

⁷¹*Ibid.* Proportion of automatic washing machines among electric washing machines in Quebec homes (%): 1960 (13); 1961 (15. 6); 1962 (18. 4); 1963 (21. 6); 1964 (25. 4); 1965 (28. 3); 1966 (32. 7); 1967 (38. 8); Dominion Bureau of Statistics, *Household Facilities and Equipment* (Ottawa, 1960–67). Jellison, pp. 180, 185.

⁷²The interviews included questions about how buying decisions were made. The response usually was that decisions were arrived at jointly. It was usually difficult to discern whether or how patriarchal privileges or status as breadwinners influence buying priorities. In the analysis of the transcripts and correspondence, I have taken women at their word. Cliff, interview (n. 17 above); Murphy, interview (n. 17 above).

Ontario, in the early 1960s. There Mary Singer and Sue Rogers found that wage-earning homemakers were significantly less likely to own automatic machines than those at home full-time.⁷³

Even in good times, the \$100–\$200 gap between the cost of a wringer and an automatic machine made Canadian women hesitate and consider other household needs. In the late fifties, as manufacturers were expanding their production of automatics, a five-year-long recession began. Many a “wife’s pay cheque” was “merely replacing that of a laid-off husband.” Marketers began to suspect what researchers later would document, that economic uncertainty had an exaggerated effect upon the purchase of major durable goods. In lean times households were “likely to be cautious about replacing any machine which wasn’t actually breaking down,” and likely to see the best new machine as the one which put least pressure on other aspects of the family budget.⁷⁴

Makers who featured users making the choice between wringer and automatic washers on the basis of the laundry technologies alone made a more elemental misjudgment. In the early 1950s, the fantasies of Canadian young people were inhabited less by shiny white boxes lined up on showroom floors than by plumbing, wiring, and pipes. The year automatic sales first exceeded wringers in the United States, electrification and running water systems were the stuff of which young Canadians’ dreams were made.⁷⁵ As a leading Canadian home economist noted in 1946 and was still noting in

⁷³J. K. Edmonds, “An Expanding Durable Goods Market: Aim Ad Pitch to Working Wife,” *Marketing*, October 28, 1960, 42; “The Working Wife—Appliances Target,” *Marketing*, December 26, 1958, 8; Vance Packard, *The Hidden Persuaders* (New York, 1957), p. 62; Maxine Margolis, *Mothers and Such, Views of American Women and Why They Change* (Berkeley, 1984), p. 167; Joan Sangster bases her finding on detailed studies by the Women’s Bureau of the Federal Department of Labour. See her “Doing Two Jobs: The Wage-Earning Mother, 1945–70,” in Parr, *A Diversity of Women*: (n. 67 above), pp. 100, 120; Mary E. Singer and Sue Rogers, “Survey of Child Care and Housekeeping Arrangements Made by Homemakers Who Are Employed Outside the Home,” June 1966, RE1 MAC AO135, University of Guelph Archives, pp. 22, 25. Newlands, letter to author (n. 16 above); Joyce Cunningham, Victoria, BC, letter to author, October 30, 1993.

⁷⁴“The Working Wife—Appliances Target,” *Marketing*, December 24, 1958, 8; Edmonds, “Aim Ad Pitch to Working Wife”; Lee Maguire, “Canadian Consumer Buying Intentions: A Study of Provincial and Socioeconomic Differences,” (master’s thesis, University of Windsor, 1967), p. 34. A copy of this thesis is in the University of Guelph Library.

⁷⁵Helen Abell and Frank Uhler, “Rural Young People and Their Future Plans, Opinion and Attitudes of Selected Rural Young People Concerning Farming and Rural Life in Alberta, Ontario and Quebec 1951–52,” Canada, Department of Agriculture, 1953, in Helen Abell Collection, University of Guelph Archives.

1954, it seemed “impractical to discuss the dream houses of the future . . . until more of our houses, urban and farm, have running hot and cold water.”⁷⁶

The engineering and marketing of tools for household work often proceeded in isolation from consideration of the mechanical systems which would be required for their support, particularly when domestic appliances were launched into international markets.⁷⁷ A 1945 survey of the “Housing Plans of Canadians” found that a third of all Canadian families, and two-thirds of those in rural areas, did not have any running water at all. Lever Brothers, anxious to sell large quantities of the laundry detergents it had designed to replace soap in washing machines, must have been discouraged to discover for itself that year that only 20 percent of Canadian farm homemakers had hot running water and could do a wash without hefting copper boilers on and off the stove.⁷⁸ The early acceptance of automatics in Quebec may be linked to the fact that 63 percent of farms there had inside running water by 1951, a year when only 40 percent of those in Ontario, 30 percent of those in the Atlantic region, and 9 percent of those in the prairies were so supplied.⁷⁹

Automatic machines required not only hot running water but a water supply under strong and steady pressure. Even as the proportion of Canadian homes with hot and cold running water increased over the postwar years (table 2), the proportion not connected to community pressure systems remained considerable. In fact this proportion appears at times even to have risen as new suburban dwellings were built beyond the reach of municipal mains.⁸⁰ No Whiggish inexorable succession of technologies here. To invest in equipment

⁷⁶Margaret McCready, “Science in the Home” (typescript, February 1946) and “Whither Home Economics” (typescript, November 1954), in Margaret McCready Collection, AO13518 and 13519, University of Guelph Archives.

⁷⁷Anne-Jorunn Berg, “A Gendered Socio-technical Construction: The Smart House,” pp. 173–74, and Andjelka Milic, “Women, Technology and Societal Failure in Former Yugoslavia,” p. 156 in Cockburn and Dilic (n. 8 above).

⁷⁸McLean-Hunter, *Housing Plans of Canadians* (Toronto, August 1945), p. 7; Lever Brothers, *Canadian Homes, a Survey of Urban and Farm Housing* (Toronto, 1945), p. 7; The regional variations were considerable. See D. R. White, “Rural Canada in Transition,” in *Rural Canada in Transition*, ed. M. A. Trembley and W. J. Anderson (Ottawa, 1966), pp. 39–41. In 1961 two-thirds of prairie farm homes still did not have inside running water.

⁷⁹White, pp. 39–41.

⁸⁰The association between use of wringer technology and the absence of municipal water systems is apparent in the United States as well. See James A. Carman and J. D. Kaczor, “Ownership Patterns for Major Household Appliances,” in *Studies in the Demand for Consumer Household Equipment*, ed. James A. Carman (Berkeley, 1965), p. 118.

TABLE 2
WATER SUPPLIES OF CANADIAN HOMES (%)

	Hot Running Water	Piped from Private Sources
1955	65.3	22.4
1956	67.9	22.0
1957	70.6	25.3
1959	75.3	21.5
1960	78.8	17.8
1961	80.2	17.8
1962	83.1	18.2
1963	84.8	18.0
1964	86.1	18.1
1965	87.4	16.9
1966	88.3	17.6
1967	89.7	16.7

SOURCE.—Dominion Bureau of Statistics, *Household Facilities and Equipment*, 1955–57, 1959–67.

which would only function well when attached to a city water system might not be wise aforethought. Women who raised their families in the resource economies of western Canada remember having to trade in new technology for old, electric for gas-powered wringers, washers for washboards as they moved to islands, or remote mining sites, or from city homes to ranches and farms. Less than an hour's drive from Toronto, Kathy Grensewich used a wringer washer until 1975 because this was the machine the household cistern would support. From such perspectives, automatics were a limited technology, more constrained by the plumbing they required to function than conventional machines.⁸¹

Important as these straightforward economic and infrastructural constraints were, they do not wholly explain the Canadian preference for wringer washers. By the early sixties, many of the economic and infrastructure considerations which favored wringer washers over automatics had faded. Wages and salaries were rising. Women remembered feeling more prosperous and more confident that prosperity could be sustained.⁸² The price gap between wringers and automatics had narrowed. Almost every household had electricity

⁸¹ Evans, interview (n. 66 above); Emma Boyd, interview by Margaret-Anne Knowles, Vancouver, BC, January 27, 1994; Kilby, interview (n. 17 above); Simpson, interview (n. 17 above); Hansen, interview (n. 16 above); Kathy Grensewich, Kitchener, Ontario, letter to author, August 2, 1993.

⁸² Leacy (n. 48 above), E49. Women who remembered the fifties as a time when they struggled to get by retrospectively often dated their own postwar prosperity from 1962.

and more than four out of five had hot running water. Yet in 1964 wringers still were outselling automatics by a considerable margin. There was still a mass market for wringers even among Canadian higher income groups. Women who owned wringers still were more likely to replace them with wringers than with automatics.⁸³ While producers and marketers asserted that replacing a wringer washing machine with an automatic was “trading-up,” it is not at all clear that women doing the wash saw the matter in the same way.

Cultural values attach to goods offered for sale. Product engineers build cultural assumptions into the machines they design. Marketers set out to find or to forge a constituency to whom these assumptions make sense. But their sales prospects will not necessarily share makers’ values, or make their determination on the basis of marketers’ assumptions. The purchase of goods is self-implicating. Thus, as David Nye notes, the possession of electrical appliances “engages the owner in a process of self-definition”; in their operation “the self and object are intertwined.” But the cultural current flows two ways. The machine may remake its user (“I was born to use an automatic”), but the user may also refeature the machine (“The automatic is a wasteful extravagance”). Once the constraints of price, plumbing, and income had begun to fall away, it was still not for makers and marketers alone to define how Canadian women would do the wash, or what for them constituted an excellent machine.⁸⁴

Machines are located within moral economies. The tools we use embody values. They may also constrain the field within which we can make moral choices. They “expand or restrict” our “actions and thoughts,” reveal or conceal the implications of our decisions.⁸⁵ Some machines, by their design, seem to operate with resplendent

⁸³In 1964, three-quarters of wringer sales were to households with incomes greater than \$5,000; see G. D. Quirin, R. M. Sultan, and T. A. Wilson, “The Canadian Appliance Industry,” working paper, University of Toronto, Institute for Quantitative Research in Social and Economic Policy, 1970, pp. 36, 77. Also in 1964, sales of wringer washers amounted to 203,000, while sales of automatics came to 162,900. 75.3 percent of wringer sales were to replace wringers, 59.6 percent of automatic sales were conversions from wringers. See “Major Appliance Study, 1964 Study: 1964 sales by types of transactions,” Major Appliance Study RG 20 vol. 1755 P8001-4404/46 NAC.

⁸⁴Sparke (n. 7 above), p. 6; Rosemary Pringle, “Women and Consumer Capitalism,” in *Women, Social Welfare and the State in Australia*, ed. Cora Baldock and Bettina Cass (Sydney, 1983), p. 100; Susan Strasser, *Satisfaction Guaranteed: The Making of the American Mass Market* (New York, 1989), p. 15; David Nye, *Electrifying America: Social Meanings of a New Technology, 1880–1940* (Cambridge, Mass., 1990), p. 281; John Fiske, *Reading the Popular* (Boston, 1989), p. 2.

⁸⁵Nye, p. 281; Mihaly Csikszentmihalyi and Eugene Rochberg-Halton, *The Meaning of Things: Domestic Symbols and the Self* (Cambridge, 1981), p. 53.

technological autonomy; others, by design, constantly disclose and allow their operator to monitor the demands of the machine upon the provisioning system of which it is a part. Automatic washing machines are of the first sort, wringer washers are of the second. Canadian women making the choice between them in the 1950s plainly distinguished the two kinds of machines in these terms, and gave this signification to the distinction.

A woman filling a washer by hauling water, or working a hand pump, or standing by a running hose knew how much fresh water she was drawing for the task. She saw the character and the quantity of the waste she was disposing into the yard, the septic field, or the sewer mains when the job was done. A homemaker who relied upon a well and septic system knew she must monitor the capacities of these systems and adapt her domestic routines daily and seasonally to accommodate their limits. Any woman who had run a wringer machine had a clearer sense of the relationships between washing, water, and waste, than those of us today who have only used automatic machines that fill and drain through discrete piping, leaving volumes drawn and disposed unobservable and unremarked. For rural women in the 1950s, the new automatics that promised to put each load of laundry through several rinses in fresh water presented an immediate hazard to operation of the farm home. But city women as well had experience with which to recognize the automatics as prodigal, of fuel to heat water, and of water itself. In response to a request for ideas for better washers, Mrs. H. G. F. Barr of London, Ontario, wrote thus in 1955: "I have been appalled at the amount of water that seems necessary to do a normal family wash in the new spin-dry type of machine. I believe one brand boasted that it rinsed clothes seven times, and all of them threw the water out after one use. There is hardly a city or town in Canada that does not have some water shortage in summer months. Large sums are being spent on reforestation, conservation and dams. It would appear that this trend towards excessive use of water should be checked now." Through the 1960s such negative consumer commentaries upon automatic washers remained common, homemakers' rhetoric to describe the new machines more evocative of the manic sorcerer's apprentice in the contemporary Disney film *Fantasia* than of the regulated modern domestic engineering manufacturers and marketers sought to portray.⁸⁶

⁸⁶The comment from Mrs. Barr and another similar by Mrs. G. F. Grady of Peterborough are in "Housewives' Ideas for Better Washers," *CHG*, June 1955, 66; the filling system of the seven-rinse Inglis automatic is described in Mrs. R. G. Morningstar, "Survey of Time and Motion Studies for Household Equipment," Report 23,

Manufacturers, in both their design decisions and marketing strategies, treated the washer as an isolated object rather than as one element in a production process called “doing the wash.” It was, after all, the washer alone they had to sell. By contrast, women consumers thought of doing laundry as a task rather than a machine. They appraised the process in the way production processes conventionally are construed, considering their own management priorities and skills and all the noncapital inputs required, as well as the traits of the machinery they might put to work.⁸⁷

In these terms, manufacturers’ emphasis on the gadgetry raised alarms among consumers. The early automatics were fragile machines, prone to break down and repairable only by specialized technicians who were not always nearby. “In the search to provide more and more automatic features,” Mrs. W. R. Walton of the Consumers Association warned, makers were producing washers “so sensitive and complex, it will take an engineering expert” to fix them.⁸⁸ By contrast in 1958 many wringer washers were being sold with long guarantees, and supported by a dense network of local dealers who by preference specialized in wringer sales. In an economy where all household appliances lately had been in short supply, where couples still were aspiring to an adequate rather than affluent standard of living, buying a delicate automatic seemed both shortsighted and frivolous.

The promise that an automatic machine would do the wash all on its own seemed a threat. Even when intervention was required, the self-regulating features of the automatics defied operator intervention. Tubs that filled by a timer ran half empty when water pressure was low. Loads that became unbalanced under lids that locked for the duration of the wash cycle caused the machine to jostle uncontrollably about the room. Women who in the 1950s expressed a

1952, Canadian Association of Consumers, MG 28 I 200 vol. 1 NAC; “Look What’s Happening to Washday,” *Chatelaine*, May 1953), pp. 79, 81; “Today’s Household Equipment,” *Chatelaine*, November 1951), p. 90; “Buying Public Loves Laundry ‘Automation,’” *HGR*, March 25, 1963, 18; “Laundry Market Accelerating Fast in Canada,” *HGR*, March 7, 1966; Nye, p. 303; Mrs. Cindy Bolger, Ariss, Ontario, letter to author, July 25, 1993; Forbes, letter to author (n. 59 above).

⁸⁷Suzette Worden, “Powerful Women: Electricity in the Home, 1919–40,” in *A View from the Interior: Feminism, Women and Design*, ed. Judy Attfield and Pat Kirkham (London, 1989), p. 140; Pringle, pp. 100–101.

⁸⁸Corley (n. 7 above), p. 136; Giedion (n. 21 above), p. 570; Mrs. W. R. Walton, paper presented before CEMA, 1962, in *Proceedings 5th Annual Appliance Marketing Seminar* (n.p., Canadian Electrical Manufacturers Association, May 17, 1962), p. 16; Greta Nelson, interview by Margaret-Anne Knowles, Burnaby, BC, March 5, 1994; Botham, letter to author (n. 66 above); Newmarch, letter to author (n. 57 above).

preference for simpler machines over which they could exercise a greater measure of control spoke from well-founded technical, managerial, and resource concerns about the operation of the new automatic laundry equipment.⁸⁹

Between the engineering of the wringer and automatic washing machines lay a generational divide. Wringer washers were made in batches, durable and simple to repair. These product characteristics happily complemented a consumer culture habituated to scarcity and schooled to value conservation and thrift. Automatics were mass produced, designed for a consumer culture which would value innovation over durability and be willing to place convenience for the machine operator ahead of household water and fuel costs and the social costs of creating more waste. For domestic appliances, at the core of this change was a redefinition of what constituted an excellent machine, a narrowing of the purchasing decision to give priority to laborsaving features over other resource concerns. Many Canadian women in the fifties and sixties were unwilling to cross this generational divide. Their loyalty to the wringer washer technology and their skepticism about the new automatics is a sign of this resistance. The choice between wringer and automatic machines implicated Canadian homemakers in forming distinctions between consumer and user, between gratification and prudence, between production and conservation, between built to last and built to replace. In the circumstances in which they then found themselves, and with the knowledge they then had, it is not hard to see why, red hands and aching back and wet floors notwithstanding, so many resisted the chromium promises of the new machine.

In the postwar years household technologies increasingly were characterized as consumer goods. The rapid rise of a culture of mass consumption and the more central place consumer goods came to hold in the definition of personal identities and civic values is well documented for the United States. Sometimes popular knowledge about these goods effected cultural changes, even when the goods

⁸⁹Perry, letter to author (n. 58 above); for reactions to Canadian women's "doubts and prejudices" about automatics, see Margaret Meadows, "What To Look for When Buying an Automatic Washer," *Chatelaine*, May 1951, 84; "Working Up Sales Lather—Market Was Made Sure It Was, Westinghouse," *Marketing*, February 22, 1957, 7; "Guarantees Washer for Twelve Years," *Marketing*, March 28, 1958, 1; "Consumer Attitude Survey—Fuels and Household Appliances," May 1961, British Columbia Electric Marketing Division, British Columbia Hydro Archives, 5, 39, 41; Bea Millar, interview by author, notes only, Vancouver, BC, 8 May 1996. Millar, head of BC Electric Home Services, noted that the first automatics needed to be bolted to a good cement foundation because the spinning tub caused the washer cabinet to shift.

themselves were not widely owned. This is the case Robert Frost makes for interwar France.⁹⁰ But the process can also work the opposite way.

Consumer goods can be, and have been, refused because of the cultural values they embody. The degree to which mass consumption became institutionalized differed between regions and nations and across classes. In the decade following World War II, these differences varied with the pace of postwar recovery, the precedence given to export or domestic markets, and household versus industrial needs. Centrally, the plausibility of mass consumption was tied to perceptions of plenty and to beliefs about how the national wealth should be husbanded and shared. For consumer goods that are also working tools this dialogue was vigorous and many faceted. In measure, manufacturers and marketers remade the material and symbolic functions of their machines to address the resistance of consumers. But as long as the purchasers of household equipment continued to think of themselves centrally as users appraising tools, they were declining to be defined solely as consumers. Their choices of what goods to buy bespoke deeper concerns about how much was enough, and for whom, framed in the politics of the households and the communities to which they belonged.

⁹⁰Frost (n. 8 above)